SEQUENCE LISTING

<110> MATSUI, Hideki
WATANABE, Tomomichi

<120> Preventives/remedies for neurodegenerative disease

<130> 3097 US0P

<150> PCT/JP2003/011631
<151> 2003-09-11

<150> JP2002-269091
<151> 2002-09-13

<160> 25

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<212> PRT
<213> Homo sapience

<400> 1

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Lys Arg Ala Arg Ser Gly Pro Gln Pro Arg Leu Pro Pro Cys Leu Leu
35 40 45
Pro Leu Ser Pro Pro Thr Ala Pro Asp Arg Ala Thr Ala Val Ala Thr
50 55 60
Ala Ser Arg Leu Gly Pro Tyr Val Leu Leu Glu Pro Glu Glu Gly Gly
65 70 75 80
Arg Ala Tyr Gln Ala Leu His Cys Pro Thr Gly Thr Glu Tyr Thr Cys
85 90 95
Lys Val Tyr Pro Val Gln Glu Ala Leu Ala Val Leu Glu Pro Tyr Ala
100 105 110

Arg Leu Pro Pro His Lys His Val Ala Arg Pro Thr Glu Val Leu Ala
115 120 125
Gly Thr Gln Leu Leu Tyr Ala Phe Phe Thr Arg Thr His Gly Asp Met
130 135 140
His Ser Leu Val Arg Ser Arg His Arg Ile Pro Glu Pro Glu Ala Ala
145 150 155 160
Val Leu Phe Arg Gln Met Ala Thr Ala Leu Ala His Cys His Gln His
165 170 175
Gly Leu Val Leu Arg Asp Leu Lys Leu Cys Arg Phe Val Phe Ala Asp
180 185 190
Arg Glu Arg Lys Lys Leu Val Leu Glu Asn Leu Glu Asp Ser Cys Val
195 200 205
Leu Thr Gly Pro Asp Asp Ser Leu Trp Asp Lys His Ala Cys Pro Ala
210 215 220
Tyr Val Gly Pro Glu Ile Leu Ser Ser Arg Ala Ser Tyr Ser Gly Lys
225 230 235 240
Ala Ala Asp Val Trp Ser Leu Gly Val Ala Leu Phe Thr Met Leu Ala
245 250 255
Gly His Tyr Pro Phe Gln Asp Ser Glu Pro Val Leu Leu Phe Gly Lys
260 265 270
Ile Arg Arg Gly Ala Tyr Ala Leu Pro Ala Gly Leu Ser Ala Pro Ala
275 280 285
Arg Cys Leu Val Arg Cys Leu Leu Arg Arg Glu Pro Ala Glu Arg Leu
290 295 300
Thr Ala Thr Gly Ile Leu Leu His Pro Trp Leu Arg Gln Asp Pro Met
305 310 315 320
Pro Leu Ala Pro Thr Arg Ser His Leu Trp Glu Ala Ala Gln Val Val
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Glu Val Val Leu Tyr Gly
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<212> DNA
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<400> 2

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<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

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<212> DNA

<213> Homo sapience

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gggctggacg aagccaggga agaggaggga gacagagaag tggttctgta tggc 1074

<210> 6

<211> 358

<212> PRT

<213> Homo sapience

<400> 6

Met Arg Ala Thr Pro Leu Ala Ala Pro Ala Gly Ser Leu Ser Arg Lys
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Lys Arg Leu Glu Leu Asp Asp Asn Leu Asp Thr Glu Arg Pro Val Gln
20 25 30
Lys Arg Ala Arg Ser Gly Pro Gln Pro Arg Leu Pro Pro Cys Leu Leu
35 40 45
Pro Leu Ser Pro Pro Thr Ala Pro Asp Arg Ala Thr Ala Val Ala Thr
50 55 60
Ala Ser Arg Leu Gly Pro Tyr Val Leu Leu Glu Pro Glu Glu Gly Gly
65 70 75 80
Arg Ala Tyr Gln Ala Leu His Cys Pro Thr Gly Thr Glu Tyr Thr Cys
85 90 95
Lys Val Tyr Pro Val Gln Glu Ala Pro Ala Val Leu Glu Pro Tyr Ala
100 105 110
Arg Leu Pro Pro His Lys His Val Ala Arg Pro Thr Glu Val Leu Ala
115 120 125
Gly Thr Gln Leu Leu Tyr Ala Phe Phe Thr Arg Thr His Gly Asp Met
130 135 140
His Ser Leu Val Arg Ser Arg His Arg Ile Pro Glu Pro Glu Ala Ala
145 150 155 160
Val Leu Phe Arg Gln Met Ala Thr Ala Leu Ala His Cys His Gln His
165 170 175
Gly Leu Val Leu Arg Asp Leu Lys Leu Cys Arg Phe Val Phe Ala Asp
180 185 190
Arg Glu Arg Lys Lys Leu Val Leu Glu Asn Leu Glu Asp Ser Cys Val
195 200 205
Leu Thr Gly Pro Asp Asp Ser Leu Trp Asp Lys His Ala Cys Pro Ala
210 215 220
Tyr Val Gly Pro Glu Ile Leu Ser Ser Arg Ala Ser Tyr Ser Gly Lys
225 230 235 240
Ala Ala Asp Val Trp Ser Leu Gly Val Ala Leu Phe Thr Met Leu Ala
245 250 255
Gly His Tyr Pro Phe Gln Asp Ser Glu Pro Val Leu Leu Phe Gly Lys
260 265 270
Ile Arg Arg Gly Ala Tyr Ala Leu Pro Ala Gly Leu Ser Ala Pro Ala
275 280 285
Arg Cys Leu Val Arg Cys Leu Leu Arg Arg Glu Pro Ala Glu Arg Leu

290 295 300

Thr Ala Thr Gly Ile Leu Leu His Pro Trp Leu Arg Gln Asp Pro Met

305 310 315 320

Pro Leu Ala Pro Thr Arg Ser His Leu Trp Glu Ala Ala Gln Val Val

325 330 335

Pro Asp Gly Leu Gly Leu Asp Glu Ala Arg Glu Glu Glu Gly Asp Arg

340 345 350

Glu Val Val Leu Tyr Gly

355

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<211> 1074

<212> DNA

<213> Homo sapience

<400> 7

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cgtgatctca agctgtgtcg ctttgtcttc gctgaccgtg agaggaagaa gctggtgctg 600

gagaacctgg aggactcctg cgtgctgact gggccagatg attccctgtg ggacaagcac 660

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cccttagccc caacccgatc ccatctctgg gaggctgccc aggtggtccc tgatggtctg 1020

gggctggacg aagccaggga agaggaggga gacagagaag tggttctgta tggc 1074

<210> 8

<211> 358

<212> PRT

<213> Homo sapience

<400> 8

Met Arg Ala Thr Pro Leu Ala Ala Pro Ala Gly Ser Leu Ser Arg Lys
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Lys Arg Leu Glu Leu Asp Asp Asn Leu Asp Thr Glu Arg Pro Val Gln
20 25 30

Lys Arg Ala Arg Ser Gly Pro Gln Pro Arg Leu Pro Pro Cys Leu Leu
35 40 45

Pro Leu Ser Pro Pro Thr Ala Pro Asp Arg Ala Thr Ala Val Ala Thr
50 55 60

Ala Ser Arg Leu Gly Pro Tyr Val Leu Leu Glu Pro Glu Glu Gly Gly
65 70 75 80

Arg Ala Tyr Arg Ala Leu His Cys Pro Thr Gly Thr Glu Tyr Thr Cys
85 90 95

Lys Val Tyr Pro Val Gln Glu Ala Pro Ala Val Leu Glu Pro Tyr Ala
100 105 110

Arg Leu Pro Pro His Lys His Val Ala Arg Pro Thr Glu Val Leu Ala
115 120 125

Gly Thr Gln Leu Leu Tyr Ala Phe Phe Thr Arg Thr His Gly Asp Met
130 135 140

His Ser Leu Val Arg Ser Arg His Arg Ile Pro Glu Pro Glu Ala Ala
145 150 155 160

Val Leu Phe Arg Gln Met Ala Thr Ala Leu Ala His Cys His Gln His
165 170 175

Gly Leu Val Leu Arg Asp Leu Lys Leu Cys Arg Phe Val Phe Ala Asp
180 185 190

Arg Glu Arg Lys Lys Leu Val Leu Glu Asn Leu Glu Asp Ser Cys Val
195 200 205

Leu Thr Gly Pro Asp Asp Ser Leu Trp Asp Lys His Ala Cys Pro Ala
210 215 220

Tyr Val Gly Pro Glu Ile Leu Ser Ser Arg Ala Ser Tyr Ser Gly Lys
225 230 235 240

Ala Ala Asp Val Trp Ser Leu Gly Val Ala Leu Phe Thr Met Leu Ala
245 250 255

Gly His Tyr Pro Phe Gln Asp Ser Glu Pro Val Leu Leu Phe Gly Lys

260 265 270

Ile Arg Arg Gly Ala Tyr Ala Leu Pro Ala Gly Leu Ser Ala Pro Ala

275 280 285

Arg Cys Leu Val Arg Cys Leu Leu Arg Arg Glu Pro Ala Glu Arg Leu

290 295 300

Thr Ala Thr Gly Ile Leu Leu His Pro Trp Leu Arg Gln Asp Pro Met

305 310 315 320

Pro Leu Ala Pro Thr Arg Ser His Leu Trp Glu Ala Ala Gln Val Val

325 330 335

Pro Asp Gly Leu Gly Leu Asp Glu Ala Arg Glu Glu Glu Gly Asp Arg

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Glu Val Val Leu Tyr Gly

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<210> 9

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<212> DNA

<213> Homo sapience

<400> 9

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cccttagccc caacccgatc ccatctctgg gaggctgccc aggtggtccc tgatggactg 1020

gggctggacg aagccaggga agaggaggga gacagagaag tggttctgta tggc 1074

<210> 10

<211> 358

<212> PRT

<213> Homo sapience

<400> 10

Met Arg Ala Thr Pro Leu Ala Ala Pro Ala Gly Ser Leu Ser Arg Lys
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Lys Arg Leu Glu Leu Asp Asp Asn Leu Asp Thr Glu Arg Pro Val Gln
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Lys Arg Ala Arg Ser Gly Pro Gln Pro Arg Leu Pro Pro Cys Leu Leu
35 40 45

Pro Leu Ser Pro Pro Thr Ala Pro Asp Arg Ala Thr Ala Val Ala Thr
50 55 60

Ala Ser Arg Leu Gly Pro Tyr Val Leu Leu Glu Pro Glu Glu Gly Gly
65 70 75 80

Arg Ala Tyr Gln Ala Leu His Cys Pro Thr Gly Thr Glu Tyr Thr Cys
85 90 95

Lys Val Tyr Pro Val Gln Glu Ala Leu Ala Val Leu Glu Pro Tyr Ala
100 105 110

Arg Leu Pro Pro His Lys His Val Ala Arg Pro Thr Glu Val Leu Ala
115 120 125

Gly Thr Gln Leu Leu Tyr Ala Phe Phe Thr Arg Thr His Gly Asp Met
130 135 140

His Ser Leu Val Arg Thr Arg His Arg Ile Pro Glu Pro Glu Ala Ala
145 150 155 160

Val Leu Phe Arg Gln Met Ala Thr Ala Leu Ala His Cys His Gln His
165 170 175

Gly Leu Val Leu Arg Asp Leu Lys Leu Cys Arg Phe Val Phe Ala Asp
180 185 190

Arg Glu Arg Lys Lys Leu Val Leu Glu Asn Leu Glu Asp Ser Cys Val
195 200 205

Leu Thr Gly Pro Asp Asp Ser Leu Trp Asp Lys His Ala Cys Pro Ala
210 215 220

Tyr Val Gly Pro Glu Ile Leu Ser Ser Arg Ala Ser Tyr Ser Gly Lys

225 230 235 240

Ala Ala Asp Val Trp Ser Leu Gly Val Ala Leu Phe Thr Met Leu Ala

245 250 255

Gly His Tyr Pro Phe Gln Asp Ser Glu Pro Val Leu Leu Phe Gly Lys

260 265 270

Ile Arg Arg Gly Ala Tyr Ala Leu Pro Ala Gly Leu Ser Ala Pro Ala

275 280 285

Arg Cys Leu Val Arg Cys Leu Leu Arg Arg Glu Pro Ala Glu Arg Leu

290 295 300

Thr Ala Thr Gly Ile Leu Leu His Pro Trp Leu Arg Gln Asp Pro Met

305 310 315 320

Pro Leu Ala Pro Thr Arg Ser His Leu Trp Glu Ala Ala Gln Val Val

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Pro Asp Gly Leu Gly Leu Asp Glu Ala Arg Glu Glu Glu Gly Asp Arg

340 345 350

Glu Val Val Leu Tyr Gly

355

<210> 11

<211> 969

<212> DNA

<213> Homo sapience

<400> 11

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<212> PRT
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Lys Arg Ala Arg Ser Gly Pro Gln Pro Arg Leu Pro Pro Cys Leu Leu
35 40 45
Pro Leu Ser Pro Pro Thr Ala Pro Asp Arg Ala Thr Ala Val Ala Thr
50 55 60
Ala Ser Arg Leu Gly Pro Tyr Val Leu Leu Glu Pro Glu Glu Gly Gly
65 70 75 80
Arg Ala Tyr Gln Ala Leu His Cys Pro Thr Gly Thr Glu Tyr Thr Cys
85 90 95
Lys Val Tyr Pro Val Gln Glu Ala Leu Ala Val Leu Glu Pro Tyr Ala
100 105 110
Arg Leu Pro Pro Asp Lys His Val Ala Trp Pro Thr Glu Gly Leu Ala
115 120 125
Gly Thr Gln Leu Leu Tyr Ala Phe Phe Thr Trp Thr His Gly Asp Met
130 135 140
His Arg Leu Ile Gly His Thr Pro Cys Ala His Cys Asp Gln Thr Arg
145 150 155 160
Lys Lys Leu Val Leu Glu Asn Leu Glu Asp Ser Cys Val Leu Thr Gly
165 170 175
Pro Asp Asp Ser Leu Trp Asp Lys His Ala Cys Pro Ala Tyr Val Gly
180 185 190
Pro Glu Ile Leu Ser Ser Arg Ala Ser Tyr Ser Gly Lys Ala Ala Asn
195 200 205

Val Trp Ser Leu Gly Val Ala Leu Phe Thr Met Leu Ala Gly His Tyr
210 215 220
Pro Phe Gln Asp Ser Glu Pro Val Leu Leu Phe Gly Lys Ile Arg Arg
225 230 235 240
Gly Ala Tyr Ala Leu Pro Ala Gly Leu Ser Ala Pro Ala Arg Cys Leu
245 250 255
Val Arg Cys Leu Leu Arg Arg Glu Pro Ala Glu Arg Leu Thr Ala Thr
260 265 270
Gly Ile Leu Leu His Pro Trp Leu Arg Gln Asp Pro Met Pro Leu Ala
275 280 285
Pro Thr Arg Ser His Leu Trp Glu Ala Ala Gln Val Val Pro Asp Gly
290 295 300
Leu Gly Leu Asp Glu Ala Arg Glu Glu Glu Gly Asp Arg Glu Val Val
305 310 315 320
Leu Tyr Gly

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<211> 1074
<212> DNA
<213> Homo sapience

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cccttagccc caacccgatc ccatctctgg gaggctgccc aggtggtccc tgatggactg 1020

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<210> 14

<211> 358

<212> PRT

<213> Homo sapience

<400> 14

Met Arg Ala Thr Pro Leu Ala Ala Pro Ala Gly Ser Leu Ser Arg Lys
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20 25 30

Lys Arg Ala Arg Ser Gly Pro Gln Pro Arg Leu Pro Pro Cys Leu Leu
35 40 45

Pro Leu Ser Pro Pro Thr Ala Pro Asp Arg Ala Thr Ala Val Ala Thr
50 55 60

Ala Ser Arg Leu Gly Pro Tyr Val Leu Leu Glu Pro Glu Glu Gly Gly
65 70 75 80

Arg Ala Tyr Gln Ala Leu His Cys Pro Thr Gly Thr Glu Tyr Thr Cys
85 90 95

Arg Val Tyr Pro Val Gln Glu Ala Leu Ala Val Leu Glu Pro Tyr Ala
100 105 110

Arg Leu Pro Pro His Lys His Val Ala Arg Pro Thr Glu Val Leu Ala
115 120 125

Gly Thr Gln Leu Leu Tyr Ala Phe Phe Thr Arg Thr His Gly Asp Met
130 135 140

His Ser Leu Val Arg Ser Arg His Arg Ile Pro Glu Pro Glu Ala Ala
145 150 155 160

Val Leu Phe Arg Gln Met Ala Thr Ala Leu Ala His Cys His Gln His
165 170 175

Gly Leu Val Leu Arg Asp Leu Lys Leu Cys Arg Phe Val Phe Ala Asp
180 185 190

Arg Glu Arg Lys Lys Leu Val Leu Glu Asn Leu Glu Asp Ser Cys Val
195 200 205

Leu Thr Gly Pro Asp Asp Ser Leu Trp Asp Lys His Ala Cys Pro Ala

210 215 220

Tyr Val Gly Pro Glu Ile Leu Ser Ser Arg Ala Ser Tyr Ser Gly Lys

225 230 235 240

Ala Ala Asp Val Trp Ser Leu Gly Val Ala Leu Phe Thr Met Leu Ala

245 250 255

Gly His Tyr Pro Phe Gln Asp Ser Glu Pro Val Leu Leu Phe Gly Lys

260 265 270

Ile Arg Arg Gly Ala Tyr Ala Leu Pro Ala Gly Leu Ser Ala Pro Ala

275 280 285

Arg Cys Leu Val Arg Cys Leu Leu Arg Arg Glu Pro Ala Glu Arg Leu

290 295 300

Thr Ala Thr Gly Ile Leu Leu His Pro Trp Leu Arg Gln Asp Pro Met

305 310 315 320

Pro Leu Ala Pro Thr Arg Ser His Leu Trp Glu Ala Ala Gln Val Val

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Pro Asp Gly Leu Gly Leu Asp Glu Ala Arg Glu Glu Glu Gly Asp Arg

340 345 350

Glu Val Val Leu Tyr Gly

355

<210> 15

<211> 1074

<212> DNA

<213> Homo sapience

<400> 15

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cccagactgc ccccctgcct gttgcccctg agcccaccta ctgctccaga tcgtgcaact 180

gctgtggcca ctgcctcccg tcttgggccc tatgtcctcc tggagcccga ggagggcggg 240

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gctcggccca ctgaggtcct ggctggtacc cagctcctct acgccttttt cactcggacc 420

catggggaca tgcacagcct ggtgcgaagc cgccaccgta tccctgagcc tgaggctgcc 480

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cgtgatctca agctgtgtcg ctttgtcttc gctgaccgtg agaggaagaa gctggtgctg 600

gagaacctgg aggactcctg cgtgctgact gggccagatg attccctgtg ggacaagcac 660

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gggctggacg aagccaggga agaggaggga gacagagaag tggttctgta tggc 1074

<210> 16
<211> 358
<212> PRT
<213> Homo sapience

<400> 16
Met Arg Ala Thr Pro Leu Ala Ala Pro Ala Gly Ser Leu Ser Arg Lys
5 10 15
Lys Arg Leu Glu Leu Asp Asp Asn Leu Asp Thr Glu Arg Pro Val Gln
20 25 30
Lys Arg Ala Arg Ser Gly Pro Gln Pro Arg Leu Pro Pro Cys Leu Leu
35 40 45
Pro Leu Ser Pro Pro Thr Ala Pro Asp Arg Ala Thr Ala Val Ala Thr
50 55 60
Ala Ser Arg Leu Gly Pro Tyr Val Leu Leu Glu Pro Glu Glu Gly Gly
65 70 75 80
Arg Ala Tyr Gln Ala Leu His Cys Pro Thr Gly Thr Glu Tyr Thr Cys
85 90 95
Arg Val Tyr Pro Val Gln Glu Ala Leu Ala Val Leu Glu Pro Tyr Ala
100 105 110
Arg Leu Pro Pro His Lys His Val Ala Arg Pro Thr Glu Val Leu Ala
115 120 125
Gly Thr Gln Leu Leu Tyr Ala Phe Phe Thr Arg Thr His Gly Asp Met
130 135 140
His Ser Leu Val Arg Ser Arg His Arg Ile Pro Glu Pro Glu Ala Ala
145 150 155 160
Val Leu Phe Arg Gln Met Ala Thr Ala Leu Ala His Cys His Gln His
165 170 175
Gly Leu Val Leu Arg Asp Leu Lys Leu Cys Arg Phe Val Phe Ala Asp

180 185 190

Arg Glu Arg Lys Lys Leu Val Leu Glu Asn Leu Glu Asp Ser Cys Val

195 200 205

Leu Thr Gly Pro Asp Asp Ser Leu Trp Asp Lys His Ala Cys Pro Ala

210 215 220

Tyr Val Gly Pro Glu Ile Leu Ser Ser Arg Ala Ser Tyr Ser Gly Lys

225 230 235 240

Ala Ala Asp Val Trp Ser Leu Gly Val Ala Leu Phe Thr Met Leu Ala

245 250 255

Gly His Tyr Pro Phe Gln Asp Ser Glu Pro Val Leu Leu Phe Gly Lys

260 265 270

Ile Arg Arg Gly Ala Tyr Ala Leu Pro Ala Gly Leu Ser Ala Pro Ala

275 280 285

Arg Cys Leu Val Arg Cys Leu Leu Arg Arg Glu Pro Ala Glu Arg Leu

290 295 300

Thr Ala Thr Gly Ile Leu Leu His Pro Trp Leu Arg Gln Asp Pro Met

305 310 315 320

Pro Leu Ala Pro Thr Arg Ser His Leu Trp Glu Ala Ala Gln Val Val

325 330 335

Pro Asp Gly Leu Gly Leu Asp Glu Ala Arg Glu Glu Glu Gly Asp Arg

340 345 350

Glu Val Val Leu Tyr Gly

355

<210> 17

<211> 1074

<212> DNA

<213> Homo sapience

<400> 17

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cccagactgc ccccctgcct gttgcccctg agcccaccta ctgctccaga tcgtgcaact 180

gctgtggcca ctgcctcccg tcttgggccc tatgtcctcc tggagcccga ggagggcggg 240

cgggcctacc aggccctgca ctgccctaca ggcactgagt atacctgcaa ggtgtacccc 300

gtccaggaag ccctggccgt gctggagccc tatgcgcggc tgcccccgca caagcatgtg 360

gctcggccca ctgaggtcct ggctggtacc cagctcctct acgccttttt cactcggacc 420

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cgtgatctca agctgtgtcg ctttgtcttc gctgaccgtg agaggaagaa gctggtgctg 600
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<210> 18
<211> 358
<212> PRT
<213> Homo sapience

<400> 18
Met Arg Ala Thr Pro Leu Ala Ala Pro Ala Gly Ser Leu Ser Arg Lys
5 10 15
Lys Arg Leu Glu Leu Asp Asp Asn Leu Asp Thr Glu Arg Pro Val Gln
20 25 30
Lys Arg Ala Arg Ser Gly Pro Gln Pro Arg Leu Pro Pro Cys Leu Leu
35 40 45
Pro Leu Ser Pro Pro Thr Ala Pro Asp Arg Ala Thr Ala Val Ala Thr
50 55 60
Ala Ser Arg Leu Gly Pro Tyr Val Leu Leu Glu Pro Glu Glu Gly Gly
65 70 75 80
Arg Ala Tyr Gln Ala Leu His Cys Pro Thr Gly Thr Glu Tyr Thr Cys
85 90 95
Lys Val Tyr Pro Val Gln Glu Ala Leu Ala Val Leu Glu Pro Tyr Ala
100 105 110
Arg Leu Pro Pro His Lys His Val Ala Arg Pro Thr Glu Val Leu Ala
115 120 125
Gly Thr Gln Leu Leu Tyr Ala Phe Phe Thr Arg Thr His Gly Asp Met
130 135 140
His Ser Leu Val Arg Ser Arg His Arg Ile Pro Glu Pro Glu Ala Ala

145 150 155 160

Val Leu Phe Arg Gln Met Ala Thr Ala Leu Ala His Cys His Gln His
165 170 175

Gly Leu Val Leu Arg Asp Leu Lys Leu Cys Arg Phe Val Phe Ala Asp
180 185 190

Arg Glu Arg Lys Lys Leu Val Leu Glu Asn Leu Glu Asp Ser Cys Val
195 200 205

Leu Thr Gly Pro Asp Asp Ser Leu Trp Asp Lys His Ala Cys Pro Ala
210 215 220

Tyr Val Gly Pro Glu Ile Leu Ser Ser Arg Ala Ser Tyr Ser Gly Lys
225 230 235 240

Ala Ala Asp Val Trp Ser Leu Gly Val Ala Leu Phe Thr Met Leu Ala
245 250 255

Gly His Tyr Pro Phe Gln Asp Ser Glu Pro Val Leu Leu Phe Gly Lys
260 265 270

Ile Arg Arg Gly Ala Tyr Ala Leu Pro Ala Gly Leu Ser Ala Pro Ala
275 280 285

Arg Cys Leu Val Arg Cys Leu Leu Arg Arg Glu Pro Ala Glu Arg Leu
290 295 300

Thr Ala Thr Gly Ile Leu Leu His Pro Trp Leu Arg Gln Asp Pro Met
305 310 315 320

Pro Leu Ala Pro Thr Arg Ser His Leu Trp Glu Ala Ala Gln Val Val
325 330 335

Pro Asp Gly Leu Gly Leu Asp Glu Ala Arg Glu Glu Glu Gly Asp Arg
340 345 350

Glu Val Val Leu Tyr Gly
355

<210> 19

<211> 1080

<212> DNA

<213> Homo sapience

<400> 19

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ttggatgaca acttagatac cgagcgtccc gtccagaaac gagctcgaag tgggccccag 120

cccagactgc ccccctgcct gttgcccctg agcccaccta ctgctccaga tcgtgcaact 180

gctgtggcca ctgcctcccg tcttgggccc tatgtcctcc tggagcccga ggagggcggg 240
cgggcctacc aggccctgca ctgccctaca ggcactgagt atacctgcaa ggtgtacccc 300
gtccaggaag ccctggccgt gctggagccc tatgcgcggg tgcccccgca caagcatgtg 360
gctcggccca ctgaggtcct ggctggtacc cagctcctct acgccttttt cactcggacc 420
catggggaca tgcacagcct ggtgcgaagc cgccaccgta tccctgagcc tgaggctgcc 480
gtgctcttcc gccagatggc caccgccctg gcgcactgtc accagcacgg tctggtcctg 540
cgtgatctca agctgtgtcg ctttgtcttc gctgaccgtg accgtgagaa gaagaagctg 600
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aagcacgcgt gcccagccta cgtgggacct gagatactca gctcacgggc ctcatactcg 720
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gagccagctg aacggctcac agccacaggc atcctcctgc acccctggct gcgacaggac 960
ccgatgccct tagccccaac ccgatcccat ctctgggagg ctgcccaggt ggtccctgat 1020
ggactggggc tggacgaagc cagggaagag gagggagaca gagaagtggt tctgtatggc 1080

<210> 20
<211> 360
<212> PRT
<213> Homo sapience

<400> 20
Met Arg Ala Thr Pro Leu Ala Ala Pro Ala Gly Ser Leu Ser Arg Lys
5 10 15
Lys Arg Leu Glu Leu Asp Asp Asn Leu Asp Thr Glu Arg Pro Val Gln
20 25 30
Lys Arg Ala Arg Ser Gly Pro Gln Pro Arg Leu Pro Pro Cys Leu Leu
35 40 45
Pro Leu Ser Pro Pro Thr Ala Pro Asp Arg Ala Thr Ala Val Ala Thr
50 55 60
Ala Ser Arg Leu Gly Pro Tyr Val Leu Leu Glu Pro Glu Glu Gly Gly
65 70 75 80
Arg Ala Tyr Gln Ala Leu His Cys Pro Thr Gly Thr Glu Tyr Thr Cys
85 90 95
Lys Val Tyr Pro Val Gln Glu Ala Leu Ala Val Leu Glu Pro Tyr Ala
100 105 110
Arg Val Pro Pro His Lys His Val Ala Arg Pro Thr Glu Val Leu Ala

115 120 125

Gly Thr Gln Leu Leu Tyr Ala Phe Phe Thr Arg Thr His Gly Asp Met
130 135 140

His Ser Leu Val Arg Ser Arg His Arg Ile Pro Glu Pro Glu Ala Ala
145 150 155 160

Val Leu Phe Arg Gln Met Ala Thr Ala Leu Ala His Cys His Gln His
165 170 175

Gly Leu Val Leu Arg Asp Leu Lys Leu Cys Arg Phe Val Phe Ala Asp
180 185 190

Arg Asp Arg Glu Lys Lys Lys Leu Val Leu Glu Asn Leu Glu Asp Ser
195 200 205

Cys Val Leu Thr Gly Pro Asp Asp Ser Leu Trp Asp Lys His Ala Cys
210 215 220

Pro Ala Tyr Val Gly Pro Glu Ile Leu Ser Ser Arg Ala Ser Tyr Ser
225 230 235 240

Gly Lys Ala Ala Asp Val Trp Ser Leu Gly Val Ala Leu Phe Thr Met
245 250 255

Leu Ala Gly His Tyr Pro Phe Gln Asp Ser Glu Pro Val Leu Leu Phe
260 265 270

Gly Lys Ile Arg Arg Gly Ala Tyr Ala Leu Pro Ala Gly Leu Ser Ala
275 280 285

Pro Ala Arg Cys Leu Val Arg Cys Leu Leu Arg Arg Glu Pro Ala Glu
290 295 300

Arg Leu Thr Ala Thr Gly Ile Leu Leu His Pro Trp Leu Arg Gln Asp
305 310 315 320

Pro Met Pro Leu Ala Pro Thr Arg Ser His Leu Trp Glu Ala Ala Gln
325 330 335

Val Val Pro Asp Gly Leu Gly Leu Asp Glu Ala Arg Glu Glu Glu Gly
340 345 350

Asp Arg Glu Val Val Leu Tyr Gly
355 360

<210> 21
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 21
caccatgcga gccacatctc tggctgcttc 30

<210> 22
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 22
gctctagcca tacagcccca cctccccttc 30

<210> 23
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 23
gccatacaga accacttctc tgtctcc 27

<210> 24
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 24

gccgccatga gcgacgtggc tattgtgaag 30

<210> 25

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 25

aggatgagcc ggtcgtcgtg ccggactatc 30